SONY
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VGN-Z650N/B

VAIO® Z Series Notebook PC

Uncompromising ultra-portable design

POWERFUL MOBILE PERFORMANCE

Enjoy the powerful performance of an Intel® Core™ 2 Duo P8700 processor (2.53GHz[1]) with Intel® Centrino® 2 processor technology and 4GB of system memory[15]. High speed 7200RPM drive gives faster response to data access.

The VAIO® Z notebook comes pre-installed with Genuine Microsoft® Windows Vista® Business 32-bit.

Uncompromising elegance weaved into a 3.42 lb[7] (with standard battery) go-anywhere package.

XBRITE-DuraView™ LCD technology with LED backlight for a brighter, crisper, tougher display.

WIRELESS FREEDOM

Your friends, your news, and your entertainment when you need it. The VAIO® Lifestyle PC lets you browse the web in more places with Verizon Wireless Mobile Broadband Built-In, America's largest and most reliable 3G network[20].

Built-in Wireless-N technology offers a boost in wireless connection speed and range[3].

Extend the reach of your Z notebook with Stereo A2DP Bluetooth® technology[16] that is ideal for advanced wireless communication and streaming uncompromised CD-quality stereo music to Bluetooth® technology enabled speakers or headphones (sold separately).

ENDLESS FEATURES

A hybrid graphics system lets you set graphics performance on the fly – no reboot necessary[5].

An HDMI™ output[17] delivers video and audio to external sources via a single cable so you can enjoy HD entertainment on your compatible big screen TV without a myriad of extra cables (HDMI™ cable sold separately).

A built-in biometric fingerprint scanner makes authentication and secure access quick and easy – you only need your fingerprint.

An integrated Trusted Platform Module (TPM) TCG Ver.1.2 compliant chip enhances security by allowing you to control access on a specific client/user basis.

G-Sensor™ Shock Protection technology makes your data even less vulnerable to loss or damage. When the built-in 3D acceleration sensor detects a risky movement, the HDD-head will lock up to secure its position and help protect the disc from scratching.

ENVIRONMENTALLY ENGINEERED FEATURES

Energy-efficient 25 watt Intel® Centrino® 2 processor offers all the performance at lower power consumption.

By using a mercury-free backlit LED display, the VAIO® Z notebook keeps one less chemical out of both your home and the landfills.

Built tough for business, the VAIO® Z notebook offers the portability of a 3.42 lbs[7] (with standard battery) form factor with the performance of a larger computer. Encased in durable carbon fiber and featuring scratch-resistant XBRITE-DuraView™ LCD technology, the Z notebook is designed to withstand the rigors of the road.

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VAIO® Z Series Notebook PC

Specifications

General

Computer Type: Notebook
Type of Use: Ultra-portable
Action Buttons: S1, S2, WLAN/Bluetooth® on/off, Performace Select
Pointing Device: Electro-static touch pad
Security: Biometric Fingerprint Sensor
Trusted Platform Module (TPM) TCG Ver.1.2 compliant

Hardware

Keyboard: QWERTY, 82 keys with 2.5mm stroke and 19.05mm pitch
Camera: Built-in MOTION EYE® camera and microphone

Processor

Type: Intel® Core™ 2 Duo Processor P8700
Speed: 2.53GHz[1]
Front Side Bus Speed: 1066MHz
L2 Cache: 3MB
Technology: Intel® Centrino® 2 processor technology

Memory

Installed: 4GB[15] PC3-8500 (2GBx2)
Maximum: 4GB[15]
Type/Speed: DDR3 SDRAM/1066MHz

Hard Drive

Capacity: 320GB[2]
Speed: 7200rpm
Type: Serial ATA
Impact Protection: G-Sensor™ Shock Protection - Hard Disk Drive Protection

Optical Drive

CD Support: Read / Write (CD/-R/-RW)
DVD Support: Read / Write (DVD±R/±RW/±R DL/-RAM)

Expansion Slots

Multimedia Card Reader: One Memory Stick PRO™ (STD / Duo) media slot with MagicGate® functionality
One ExpressCard® / 34 media slot
One Secure Digital (SD memory card) media slot

Audio

Sound System: Intel® High Definition Audio

Display

Screen Size: 13.1"[6]
Resolution: 1600x900
XBRITE-DuraView™ Technology: Yes
Back Light Technology: LED

Graphics

Processor: NVIDIA® GeForce(R) 9300M GS GPU with Total Available Graphics Memory of 1500MB (max.) and Mobile Intel® Graphics Media Accelerator 4500MHD with Intel® Clear Video Technology. Total Available Graphics Memory: 1311MB (max.)[10]
Video RAM: 256MB of dedicated video RAM
Technology: Hybrid Graphics System[19]
Chipset: Mobile Intel® GM45 Express Chipset
Max. External Resolution via VGA: 2048x1536
Max. External Display Resolution via HDMI™ : 1920x1080
Max. External Resolution via DVI: 1920x1200

Inputs and Outputs

Modem Jack: 1
Microphone Input: 1
Port Replicator Connector(s): 1 (Bottom)
USB Port(s): 2 (2.0 compliant)
VGA Output(s): 1
DC-In: 1
i.LINK® Connection: 1 (4pin) i.LINK® connector (IEEE 1394)[9]
Headphone Output(s): 1
Ethernet Connection (s): 1
HDMI™ Output: 1[17]

Power

Battery Type: Standard Capacity Lithium-ion Battery (VGP-BPS12)
Estimated Battery Life: 3.0 to 6.0 hours[11] Standard Capacity Battery
4.5 to 9.0 hours[11] Large Capacity Battery
Power Requirements: 100W + 10%

Wireless/Networking

Ethernet Protocol: 10Base-T/100Base-TX/1000Base-T (Gigabit)
Ethernet Speed: Fast Ethernet (RJ-45)
Wi-Fi: Intel® WiFi Link 5100AGN (802.11a/b/g/n)[3]
Bluetooth® Technology: Integrated Stereo A2DP Bluetooth® Technology (2.1 + EDR)[16]
Modem Type: Integrated V.92/V.90 Modem (RJ-11)
Mobile Broadband: Verizon Wireless Mobile Broadband Built-in[20]

Software

Operating System: Genuine Microsoft® Windows Vista® Business 32-bit / XP Pro downgrade
Supplied Software: Microsoft® Works SE 9.0 w/ 60-Day Trial Version of Microsoft® Office Small Business 2007[14]
VAIO® Multimedia Suite: VAIO® Startup Assistant
Click to Disc Editor - Import, Edit, Burn
VAIO® Movie Story - Simple Movie Creation
VAIO® MusicBox - Music by Mood
VAIO® Media plus - Multimedia Streaming Software
*Please access VAIO® Help and Support from your PC for a complete list of software applications and trials.
Anti-Virus Software: Microsoft® Windows Live™ OneCare™ Trial Version[18]

Service and Warranty Information

Telephone Support: 1 year toll-free technical telephone assistance, available 24/7[13]
Online and Email Support: Support available from http://www.esupport.sony.com/EN/VAIO
International Service: 1 year international service plan available. Registration required. See www.sony.com/IRSP for details.
Limited Warranty Term: 1 year limited warranty[12]. See actual warranty for details.

Environmental Information

RoHS®: Compliant
For more information: www.sony.com/vaioeco

Dimensions

Weight: 3.42 lbs[5] (with standard battery)
Measurements: 12.4"(W) x 1.0-1.3"(H) x 8.3"(D)[7,8]

Supplied Accessories

Standard Capacity Lithium-ion battery (VGP-BPS12)
AC Adapter (VGP-AC19V26)
Power Cable

Optional Accessories

Stick AC Adapter (VGP-AC19V21)
Port Replicator (VGP-PRZ1)
Additional Standard Capacity Battery (VGP-BPS12)
Large Capacity Battery (VGP-BPL12)
VAIO® Protection Case (VGP-CKZ1)
USB Optical Mouse (VGP-UMS20/B)
Bluetooth® Laser Mouse[4] (VGP-BMS33/B)
Neoprene Case (VGP-AMB10)

Color: Black
UPC Code: 027242760622

1. GHz denotes microprocessor internal clock speed; other factors may affect application performance. CPU speed will be reduced under certain operating conditions.
2. GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary. A portion of hard disk space is reserved as a recovery partition.
3. Requires 802.11n compatible access point. Some functionality may require Internet services.
4. Broadband Internet service required along with third party services which may require a subscription or other service fee.
5. VAIO® Z Series notebooks that are either pre-installed with or have been downgraded to Windows® XP Professional will need to be rebooted to switch between Speed and Stamina modes.
6. Viewable area measured diagonally.
7. Non-metric weights and measures are approximate and may vary.
8. Measured at the narrowest point
9. i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connector. All products with an i.LINK connector may not communicate with each other.
10. Total Available Graphics Memory refers to the new Windows Vista® classification of graphics memory, which varies depending on the operating condition, version of device driver and system memory size.
11. Actual battery life may vary based on product settings, usage patterns and environmental conditions.
12. See actual limited warranty for details. For a copy of Sony's warranty, please visit www.sony.com/pcsupport, call toll-free 888-476-6972 (888-4SONYPC) or write to Sony Electronics, 12451 Gateway Boulevard, Fort Myers, FL 33913.
13. For certain third party software applications, Sony provides first level phone support. Additional telephone support may be available from the applicable 3rd party vendor. Availability and schedule for any such support is determined by the aplicable software vendor.
14. 60-Day Trial Version of Microsoft® Office 2007 - This trial software will work only for 60 days after you first use it. You will not be able to use the software if you dont activate it as described the first time you use the software. You can activate the software by Internet: Internet service charges may apply. If you want to keep using the software after the 60-day trial period, you must convert to the perpetual version. You can convert online by following the conversion instgructions presented during setup and paying the required fees.
15. A portion of the system memory over 3GB may not be available to the operating system.
16. Interoperability and compatibility among Bluetooth® devices vary.
17. Requires high definition-capable display with HDMI™ connector. Image quality will vary.
18. Microsoft® Windows Live™ OneCare™ Trial Version – This trial software will work for ninety (90) days after you first use it. You will not be able to use the software if you do not activate it as described the first time you use the software. You can activate the software by Internet: Internet service charges may apply. If you want to keep using the software after the 90-day trial period, you must buy a subscription. You can subscribe online by following the conversion instructions presented during setup and paying the required fees.
19. Windows Vista® is required for feature functionality. Rebooting is necessary on pre-installed and downgraded Windows® XP Professional models.
20. Subscription with a third party carrier is required. Service activation and other fees apply. Terms & Conditions and additional restrictions apply.

Computer Interface: For this product,there are a multitude of varying software packages and add-on hardware options. This product is not manufactured to work with any specific software, and Sony does not and cannot make any warranty or representation with respect to the performance of this product with any particular software packages and/or non-Sony add-on hardware options except those mentioned here. Sony hereby disclaims any representations or warranties that this product is compatible with any combination of non-Sony products you may choose to connect to it. While Sony representatives or Sony authorized dealers may be able to assist you and may make recommendations, they are NOT authorized to vary or waive this disclaimer. Purchasers must determine for themselves the suitability and compatibility of the hardware and software in each and every particular instance. Software titles pre-installed on the Sony computer are subject to change without notice. Preinstalled software may not be identical to retail versions or have all documentation. Features and specifications are subject to change without notice.
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